

# MARINE CORPS WARFIGHTING LABORATORY

The **Integrated GPS Radio System (IGRS)** is a position location information (PLI) system developed by Stanford Research Institute (SRI) International to meet Marine Corps and other Service PLI needs.

**Background:** The Lab has used IGRS during live-force experimentation for data collection and analysis since the Urban Warrior Advanced Warfighting Experiment in 1997. IGRS I has been successfully used during many previous experiments while IGRS II, which is currently under development, takes advantage of recent technological advances like the tactical voice recording. The Lab currently owns over 500 IGRS I units and will procure a number of IGRS II units during fiscal year 2004.

**Description:** IGRS consists of individual VHF radio units that transmit PLI to display on a PC-based control station. IGRS units are compact (IGRS I units weigh 8 lbs and IGRS II units weigh 3 lbs) and can be mounted on vehicles or worn by personnel. The display at the control station shows the location of the vehicles and the personnel.

IGRS can be used to:

- Determine ground truth for event reconstruction
- Simulate effects of fires
- Track troop and vehicle movement
- Improve training and experimentation management
- Enhance personnel safety

IGRS II will provide the same benefits as IGRS I, but will also serve as an experimental system to help gain insight about how tactical PLI should be used by the Operating Forces. IGRS II will use a combination of legacy line-of-sight technology and exploit emerging on-the-move/over-the-horizon technology.

The Lab will use IGRS during several Combined Arms Exercise (CAX) events to assist the Training

## INTEGRATED GPS RADIO SYSTEM *fact sheet*



and Education Command (TECOM) to meet Joint National Training Capability objectives. Lab efforts to support TECOM will focus on event reconstruction for after-action reviews. The Lab will help TECOM examine the feasibility of broadcasting CAX event PLI data to external locations to help establish a more productive, efficient, joint, virtual training environment.

**Deliverable Product:** Operations in the Global War on Terrorism have highlighted the importance of accurate, real-time PLI. Commanders will likely place even greater reliance on PLI in the future. The Lab will continue to use IGRS as a test bed to further expand on its ground truth recording and event reconstruction capabilities. The Lab will also conduct experiments to help resolve tactical friendly-force PLI management issues.

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